

J. H. BROAD.

Corn-Planter.

Patented Aug. 30, 1864.

No. 43,968.

Fig. 1.

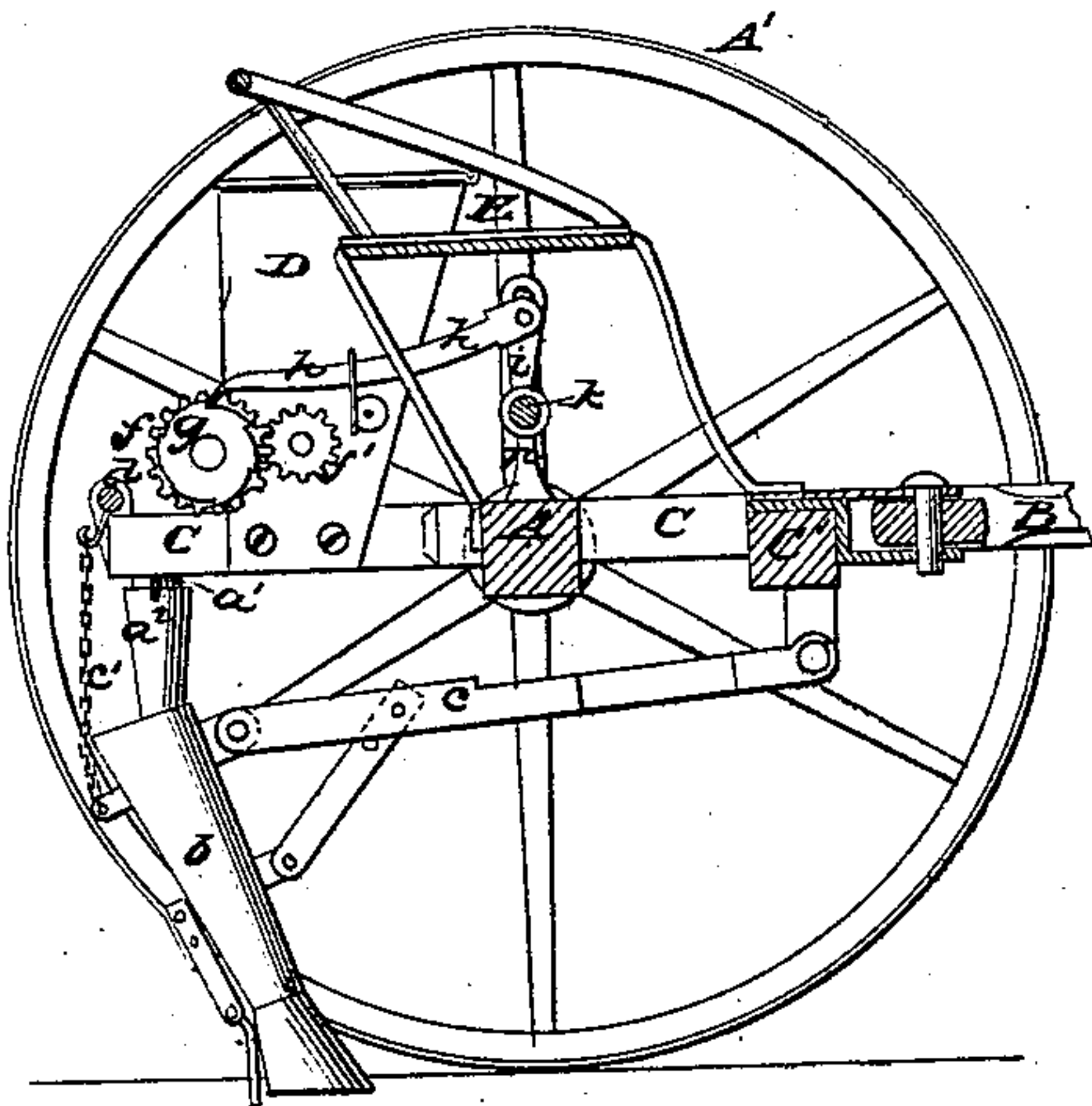


Fig. 2.

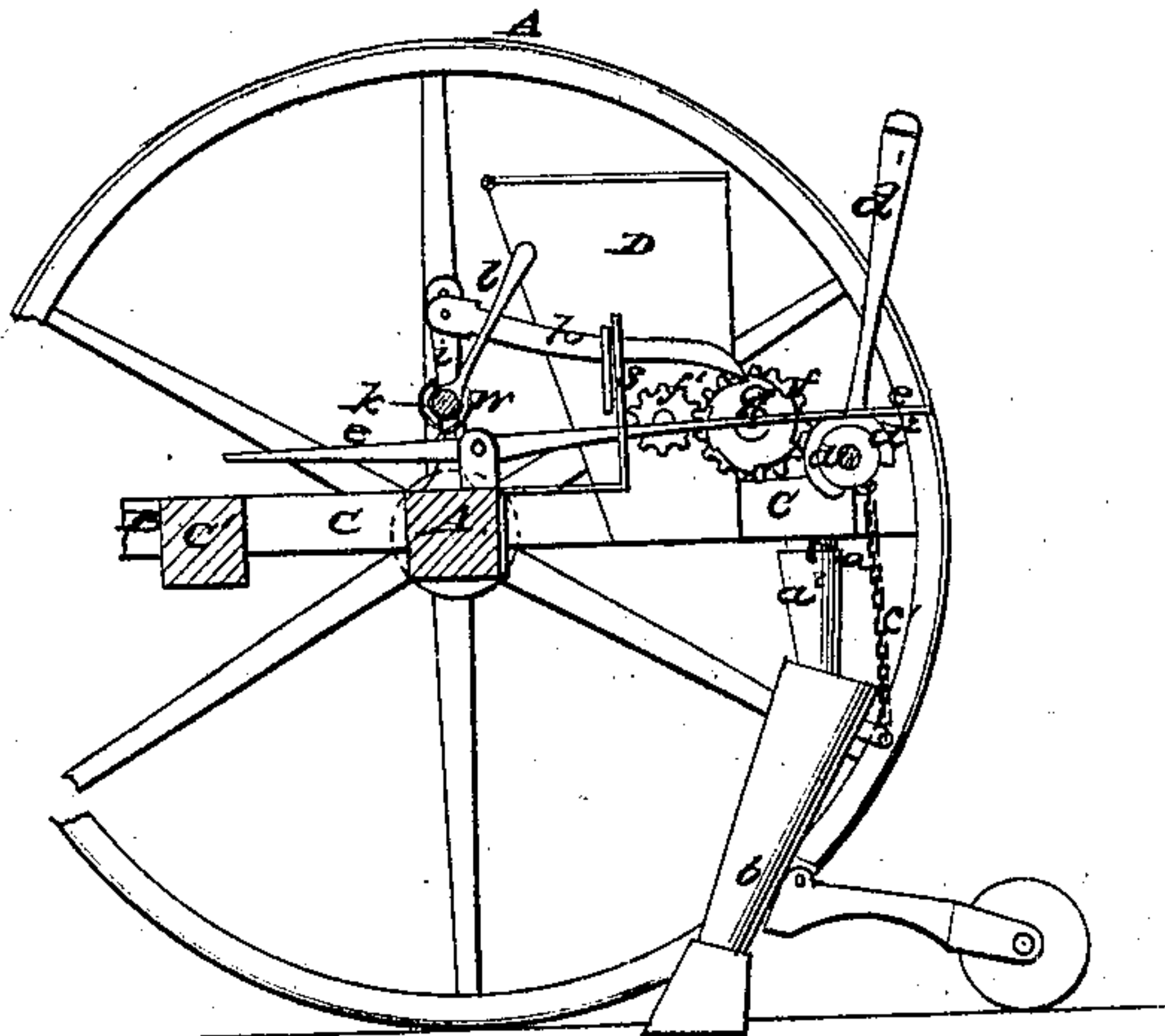


Fig. 5.

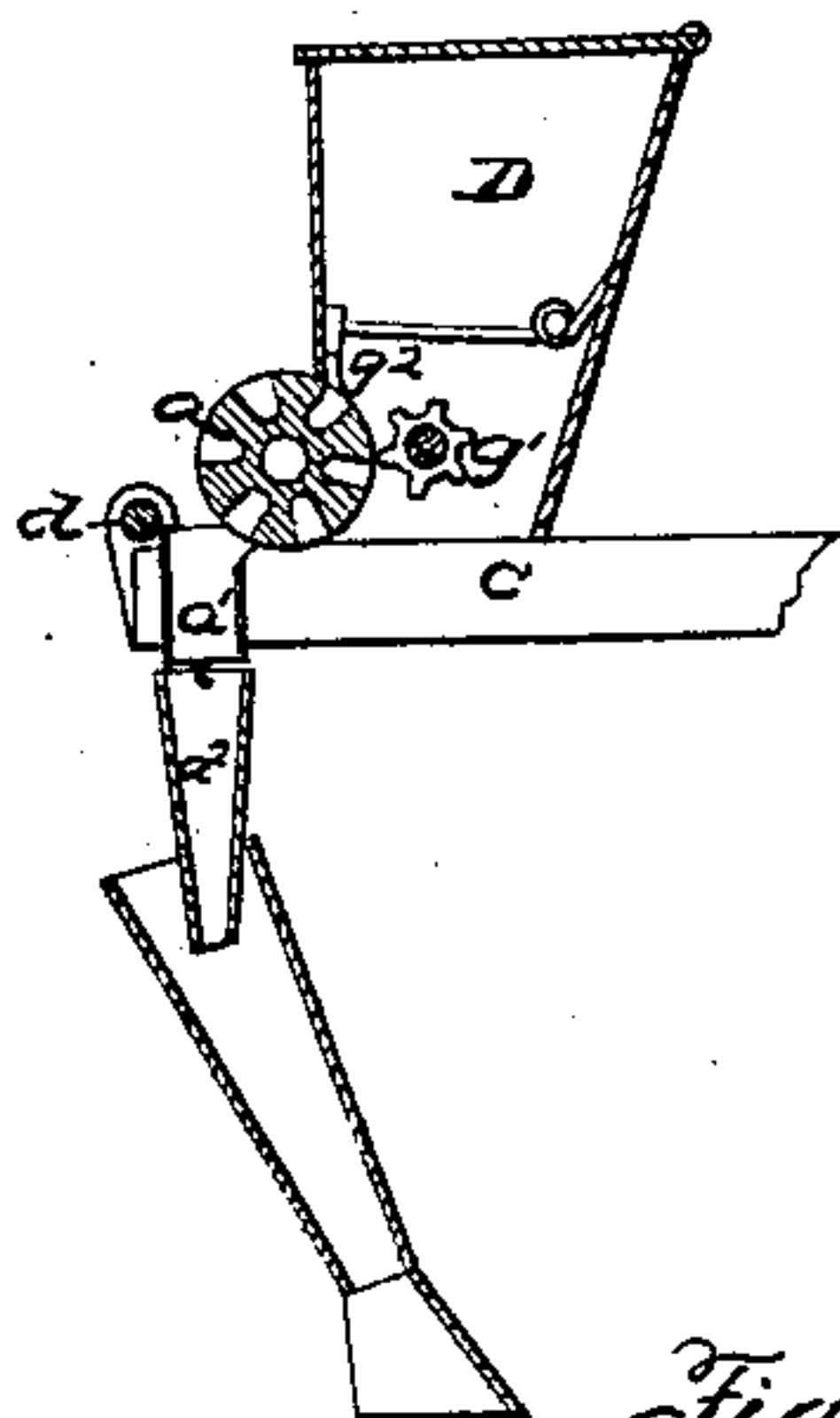


Fig. 6.



Fig. 3.

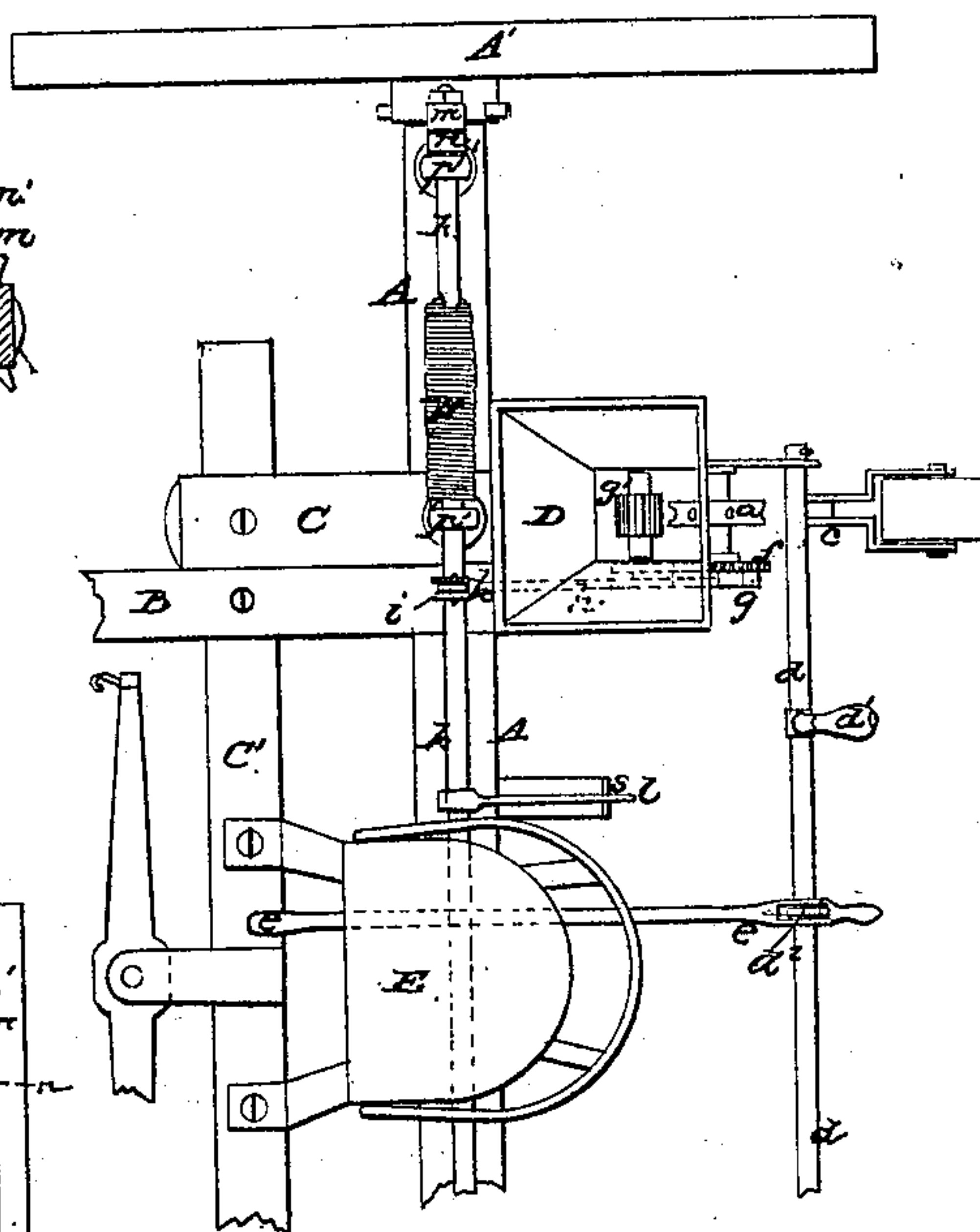
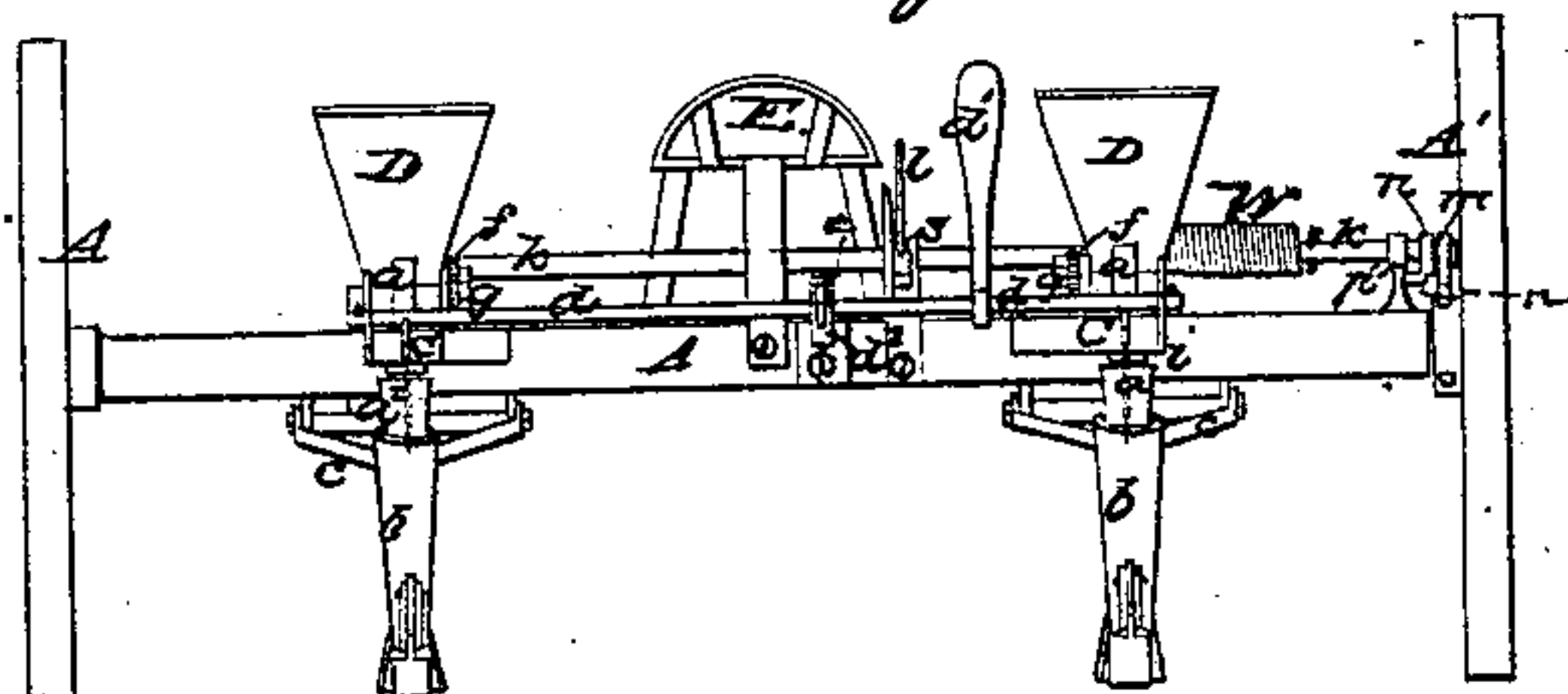


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN H. BROAD, OF LODI, NEW YORK.

IMPROVED CORN-PLANTER.

Specification forming part of Letters Patent No. 43,968, dated August 30, 1864.

To all whom it may concern:

Be it known that I, JOHN H. BROAD, of Lodi, county of Seneca, and State of New York, have invented a new and Improved Machine for Planting Corn in Hills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical longitudinal section, taken through the center of my improved machine. Fig. 2 is a longitudinal sectional view, showing the opposite side of the machine. Fig. 3 is a plan view of that side of the machine represented by Fig. 2. Fig. 4 is an elevation of the rear end of the machine. Fig. 5 is a longitudinal vertical section through the left-hand hopper, showing the seed-distributing devices. Fig. 6 shows the devices for operating the pawl-shaft and giving motion to the seed-distributing devices.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain improvements on that class of corn-planters wherein the mechanism for dropping the corn in hills is mounted upon a carriage which is drawn by a horse.

My invention provides for actuating the dropping mechanism either by the motion of one or both of the driving-wheels or by means of a lever in the hands of the driver.

It also provides for starting or stopping the motion of the distributing mechanism at the pleasure of the attendant and while the machine is moved forward; also, for keeping the seed-cups clear and preventing them from clogging, all as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

In the accompanying drawings, A represents the axle-tree and A' A' the carriage-wheels.

B are the thills, and C C are two longitudinal beams, which extend out in front and rear of the axle-tree, and are braced by a forward transverse beam, C', to which is also secured the thills B, the whole making a strong and substantial carriage for sustaining the seed-hoppers and the devices for dropping the corn. The two hoppers D D are secured near the rear ends of their respective beams C C, and these hoppers are both furnished with cylinders *a a*,

having depressions or seed-cups made in their peripheries, which receive the grains of corn from the hopper and discharge them into the tubes or perforations *a'* passing through the rear ends of the beams C C into the funnels *a²*, which conduct the corn into the tubular markers *b b*. These markers are shod with flaring openers and provided with coverers or rollers, so that they open the earth, deposit the grains of corn, and then cover them.

The markers are pivoted in a suitable manner to forward hinged braces, *c c*, which admit of their being thrown into or out of the ground at pleasure. These markers are suspended by chains *c' c'* from short arms, which project from a horizontal rock-shaft, *d*, having its bearings at the rear ends of the beams C C, as shown in Figs. 1 and 4. This rock-shaft has a lever-handle, *d'*, secured to it in a convenient position to be used by the driver sitting in his seat E or by a person walking behind the machine. The shaft *d* also has a catch-plate, *d²*, secured to it, which, when the lever *d'* is drawn forward so as to raise the markers clear of the ground, catches the foot and hand lever *e* and retains the markers in an elevated position until it is desired to drop them again, when the driver or a person behind the machine raises the rear end of lever *e* and releases the rock-shaft *d*. Lever *e* has its fulcrum on the axle A, and its forward end is arranged in a position which will be convenient for the feet of the driver sitting in seat E.

The seed-cup drums *a a* work partially within and partially without their seed-hoppers D D, and their outer exposed surfaces should be covered with a suitable guard to prevent the grains of corn from escaping from the cups until they arrive directly over the tubes *a'*. The short shafts of these drums *a a* carry on their inner ends pinion spur-wheels *f f* and ratchet-wheels *g g*. The former engage with spur-wheels *f' f'*, which are keyed to the inner ends of short shafts that pass transversely through the hoppers and carry inside thereof corrugated or toothed agitators *g' g'*, which are arranged in such relation to the seed-cup drums *a a* as to insure a constant supply of corn to these drums. Brushes *g²* may also be arranged within the hoppers to brush out of the seed-cups all supernumerary grains.

The ratchet-wheels *g g* on the shafts of the seed-cup drums are acted upon by pawls *h h*,

which pass loosely through staple-guides projecting from the hoppers, and are pivoted to the ends of arms *i i*, which are secured to a horizontal transverse rock-shaft, *k*. This rock-shaft has its bearings in pillars *p p'*, projecting up from the axle-tree *A*, and on one end of this shaft a dog, *m*, is loosely applied, so as to hang down over the hub of the carriage-wheel *A'*, as shown in Figs. 3 and 6, and to be struck and pressed forward by each one of the spurs which project from the hub of said wheel when the machine is drawn along or backed. Alongside of this loose dog *m* a stop-plate, *n*, is keyed to the shaft *k*, which plate has two pins projecting from its edges, one of which catches against the pillow *p'* and the other is struck by the dog *m* when this dog is pressed forward; but when the dog is pressed backward in backing the machine it will not strike the plate *n*. The plate *n* is brought back to its position, after it is thrust out by the spurs acting upon the dog *m*, by a spring, *w*, which is coiled around the shaft *k* and attached to this shaft at one end and to one of the pillows, *p*, at the other end. By this arrangement and by having the spurs on the hub of the carriage-wheel set at regular intervals apart the seed will be regularly dropped automatically.

A hand-lever, *l*, is secured to the shaft *k* near the driver's seat, which, when moved back and set in the notched plate *s*, will throw the dropping mechanism out of action. This can be done by the driver while sitting on the machine or by a person walking in rear of the machine.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. Giving an intermittent rotary motion to both the seed-cup drums *a a* and the agitators *g' g'* by means of ratchet-wheels and pawls *g g h h*, rock-shaft *k*, and a spurred hub operating upon a dog, *m*, all arranged and operating substantially as described.

2. The combination of the spurred hub, dog *m*, and toothed plate *n* with the rocking pawl-shaft *k* and seeding mechanism, substantially as described.

3. The catch-plate *s* and lever-arm *l*, in combination with the rock shaft *k*, substantially as and for the purposes described.

JOHN H. BROAD.

Witnesses:

JEROME B. CRISE,
WM. P. SMITH.